

IN THE CLAIMS

Please add new Claims 17-47 as follows:

--17. A method of performing bandwidth allocations, the method comprising:
receiving a bandwidth request from a terminal over a communication channel, the
bandwidth request specifying a desired number of transmission slots of a frame;
determining allocation of the transmission slots of the frame based upon the received
bandwidth request;
distributing the allocated transmission slots throughout the frame according to a
prescribed sequence; and
selectively sending an allocation command identifying the allocated transmission slots to
the terminal based upon the distributing step.

18. The method as claimed in claim 17, wherein the bandwidth request in the
receiving step is at least one of a rate request and a volume request, the rate request specifying a
constant number of transmission slots, the volume request specifying a specific number of
transmission slots.

19. The method as claimed in claim 18, further comprising:
receiving a follow-up request from the terminal, the follow-up request being associated
with the volume request and specifying additional desired transmission slots; and
selectively discarding the follow-up request based upon traffic load.

20. The method as claimed in claim 18, wherein the volume request has a time stamp that indicates a time of receipt of a previous allocation command, the method further comprising:
comparing the time stamp with an allocation timer value to determine whether the time stamp exceeds the allocation timer value; and
selectively discarding the volume request based upon the comparing step.


21. The method as claimed in claim 18, wherein the bandwidth request is a rate request, the method further comprising:
placing the rate request in a queue;
receiving another bandwidth request that is a rate request, the other rate request being associated with a fallback rate; and
discarding the queued rate request.

22. The method as claimed in claim 18, wherein the rate request and the volume request each has two levels of priority.

23. The method as claimed in claim 22, further comprising:
placing the bandwidth request in a queue, the queue being designated as one of at least a high priority rate request queue, a low priority rate request queue, a high priority volume request queue, and a low priority volume request queue, wherein the rate request queues are of higher priority than the volume request queues.

24. The method as claimed in claim 22, wherein the volume request queues are robin round queues.

25. The method as claimed in claim 23, further comprising:
reserving a minimum number of transmission slots for the low priority volume request queue.



26. The method as claimed in claim 17, the method further comprising:
receiving another bandwidth request from the terminal, the other bandwidth request being received using a previously allocated transmission slot.

27. The method as claimed in claim 17, wherein the frame in the receiving step is a TDMA (Time Division Multiple Access) frame.

28. The method as claimed in claim 17, wherein the communication channel in the determining step is at least one of a data channel and a contention channel.

29. A method of communicating over a satellite communication system, the method comprising:

transmitting a bandwidth request to a satellite over a communication channel, the bandwidth request specifying a desired number of transmission slots of a frame; and

receiving an allocation command from the satellite that is configured to perform the steps of:

determining allocation of the transmission slots of the frame based upon the received bandwidth request, and

distributing the allocated transmission slots throughout the frame according to a prescribed sequence.

30. The method as claimed in claim 29, wherein the bandwidth request in the transmitting step is at least one of a rate request and a volume request, the rate request specifying a constant number of transmission slots, the volume request specifying a specific number of transmission slots.

31. The method as claimed in claim 30, further comprising:
transmitting a follow-up request to the satellite, the follow-up request being associated with the volume request and specifying additional desired transmission slots, wherein the satellite selectively discards the follow-up request based upon traffic load.

32. The method as claimed in claim 30, wherein the volume request has a time stamp that indicates a time of receipt of a previous allocation command, the satellite being configured to further perform the steps of:

comparing the time stamp with an allocation timer value to determine whether the time stamp exceeds the allocation timer value; and

selectively discarding the volume request based upon the comparing step.

33. The method as claimed in claim 30, wherein the bandwidth request is an original rate request, the method further comprising:

transmitting another bandwidth request that is a rate request, the other rate request being associated with a fallback rate and superceding the original rate request.

34. The method as claimed in claim 30, wherein the rate request and the volume request each has two levels of priority.

35. The method as claimed in claim 29, the method further comprising:
piggybacking a follow-up request to the satellite, the follow-up request being associated with the volume request and specifying additional desired transmission slots.

36. The method as claimed in claim 29, wherein the frame in the transmitting step is a TDMA (Time Division Multiple Access) frame.

37. The method as claimed in claim 29, wherein the communication channel in the transmitting step is at least one of a data channel and a contention channel.

38. A communication system for performing bandwidth allocations, the system comprising:

a plurality of queues configured to store a bandwidth request received from a terminal over a communication channel, the bandwidth request specifying a desired number of ~~transmission slots of a frame; and~~

a bandwidth control processor communicating with the plurality of queues, the bandwidth control processor being configured to determine allocation of the transmission slots of the frame based upon a received bandwidth request that is stored in one of the plurality of queues, to distribute the allocated transmission slots throughout the frame according to a prescribed sequence, and to selectively send an allocation command identifying the allocated transmission slots to the terminal.

39. The system as claimed in claim 38, wherein the bandwidth request is at least one of a rate request and a volume request, the rate request specifying a constant number of transmission slots, the volume request specifying a specific number of transmission slots.

40. The system as claimed in claim 39, wherein a follow-up request from the terminal is stored in one of the plurality of queues, the follow-up request being associated with the volume request and specifying additional desired transmission slots, the bandwidth control processor being selectively configured to discard the follow-up request based upon traffic load.

41. The system as claimed in claim 39, wherein the volume request has a time stamp that indicates a time of receipt of a previous allocation command by the terminal, the bandwidth control processor being configured to compare the time stamp with an allocation timer value to determine whether the time stamp exceeds the allocation timer value, and to selectively discard the volume request based upon the determination.

42. The system as claimed in claim 39, wherein the plurality of queues store at least two rate requests, one of the stored rate requests being associated with an original rate, another one of stored rate requests being associated with a fallback rate, the bandwidth control process discarding the one rate request associated with the original rate.

43. The system as claimed in claim 39, wherein the rate request and the volume request each has two levels of priority.

44. The system as claimed in claim 39, wherein the plurality of queues being designated respectively as a high priority rate request queue, a low priority rate request queue, a high priority volume request queue, and a low priority volume request queue, the rate request queues being of higher priority than the volume request queues, the volume request queues being round-robin queues, the bandwidth control processor reserving a minimum number of transmission slots for the low priority volume request queue.

45. The system as claimed in claim 38, wherein the plurality of queues store another bandwidth request from the terminal, the other bandwidth request being received using a previously allocated transmission slot.

46. The system as claimed in claim 38, wherein the frame is a TDMA (Time Division Multiple Access) frame.

47. The system as claimed in claim 38, wherein the communication channel is at least one of a data channel and a contention channel.--